



Cisco 806, Cisco 820 Series, Cisco 830 Series, SOHO 70 Series and SOHO 90 Series Routers ROM Monitor Download Procedures

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This document contains procedures for downloading ROM Monitor (ROMMON) software upgrade images. A ROMMON upgrade is required if you are upgrading Cisco 828, Cisco 830 Series, and SOHO 90 Series router to Cisco IOS Release 12.3(8)YA or later to take advantage of the IOS “No service password recovery” feature. If you have purchased a Cisco 828, Cisco 830 Series, or SOHO 90 Series router with a Cisco IOS Release 12.3(8)YA or later image already installed, you do not need to install a ROMMON upgrade image.

A ROMMON upgrade image is also required if you are upgrading Cisco IOS 827-4V Voice images to Cisco IOS Release 12.2(2)XK or later. If you have purchased a Cisco 827-4V router with a Cisco IOS Release 12.2(2)XK or later image already installed, you do not need to install a ROMMON upgrade image.



Caution

If you are downloading a C820 Cisco IOS image with the Voice software feature, you must first upgrade to ROMMON upgrade image version 12.2(4r)XM2 or later before you download and run the IOS image on your Cisco 827-4V router. Failure to do so will cause the router to operate improperly and enter into an unrecoverable state.

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Supported Platforms

Supported Platforms

While the Cisco 827-4V is currently the only router requiring a ROMMON upgrade image, and the IOS “No service password recovery” feature introduced with Cisco IOS Release 12.3(8)YA is the only reason to upgrade Cisco 828, Cisco 830 Series, and SOHO 90 Series ROMMON images, ROMMON upgrade images are supported on the following routers.

- Cisco 806
- Cisco 826
- Cisco 827
- Cisco 827-4V
- Cisco 828
- Cisco 831
- Cisco 836
- Cisco 837
- SOHO 71
- SOHO 76
- SOHO 77
- SOHO 78
- SOHO 91
- SOHO 96
- SOHO 97

Important Notes

The 827-4V Cisco IOS images available on Cisco IOS Release 12.2(2)XK and later require the use of a ROMMON upgrade image version 12.2(1r)XE2 or later. Attempting to run Release 12.2(2)XK or later IOS Voice images with an earlier ROMMON image installed will cause the router to operate improperly and enter into an unrecoverable state. In order to prevent this from occurring, download a ROMMON upgrade image version 12.2(4r)XM2 or later from the CCO website onto a TFTP server, and then load it onto the router before running the new IOS image. These ROMMON images are backward compatible with all Cisco IOS images released for the Cisco 827-4V router.

Installing a ROMMON upgrade image on other routers in the supported platform list may allow you to take advantage of software enhancements included in later ROMMON images and Cisco IOS releases. In particular, there is a potential for an intermittent hang after using the reload command that is eliminated by installing a ROMMON upgrade. Further, the IOS “No service password recovery” feature, introduced with Cisco IOS Release 12.3(8)YA for Cisco 820, Cisco 830 Series, and SOHO 90 Series routers requires a ROMMON upgrade.

Downloading Images

Two procedures are provided for copying ROMMON images to the supported Cisco routers: one performed in ROMMON mode using the **tftpdnld** command, and another performed in IOS EXEC mode, using the **copy tftp** command. You may use either procedure. The examples below use the 12.2(4r)XM2 ROMMON upgrade image, and can be used in all Cisco 800 series routers that support ROMMON upgrade images. As it was originally only required for Cisco 827-4V routers, it has a name specific to the Cisco 820 series of routers with the version number appended: C820_RM_ALT.srec.122-4r.XM2. Later versions of ROMMON upgrade files will be named following a similar pattern.

Upgrading the ROMMON Image from ROMMON Mode

Complete these steps to upgrade the ROMMON image from ROMMON mode.

- Step 1** Download the ROMMON image C820_RM_ALT.srec.122-4r.XM2 from CCO, and place it on your TFTP server.
- Step 2** Place the router in ROMMON mode by sending a telnet **break** command during the router reboot sequence. The following prompt will be displayed, indicating entry into ROMMON mode:
- ```
rommon>
```
- Step 3** In ROMMON mode, set the following parameters by typing the names followed by an equals sign as shown, and then typing a value for the parameter.
- ```
IP_ADDRESS=
IP_SUBNET_MASK=
DEFAULT_GATEWAY=
TFTP_SERVER=
TFTP_FILE=
```

Table 1 describes the type of value to provide for each parameter.

Table 1 ROMMON Parameters and Values

Parameter	Value
IP_ADDRESS=	IP address of the router
IP_SUBNET_MASK=	Subnet mask of the router
DEFAULT_GATEWAY=	IP address of the router's default gateway
TFTP_SERVER=	IP address of the TFTP server on which the ROMMON image is located
TFTP_FILE=	The path and filename of the ROMMON image

- Step 4** Verify the parameter settings by entering the **set** command. Correct any mistakes by reentering the parameter and value.
- ```
rommon>set
TFTP_CHECKSUM=0
IP_SUBNET_MASK=255.255.255.0
DEFAULT_GATEWAY=1.6.0.1
```

## ■ Downloading Images

```
TFTP_SERVER=223.255.254.254
IP_ADDRESS=1.6.97.20
TFTP_FILE=C820_RM_ALT.srec.122-4r.XM2
```

**Step 5** Upgrade the ROMMON image by entering the **tftpdnld -u** command. Sample output is shown below.

```
rommon>tftpdnld -u
IP_ADDRESS: 1.6.97.20
IP_SUBNET_MASK: 255.255.255.0
DEFAULT_GATEWAY: 1.6.0.1
TFTP_SERVER: 223.255.254.254
TFTP_FILE: C820_RM_ALT.srec.122-4r.XM2
WARNING: alternate copy of rommon exists, filename: C820_RM_ALT.srec all existing data in
the alternate copy of rommon will be lost.
Do you wish to continue? y/n: [n]:
```

**Step 6** Enter **y** to start the download. A series of exclamation points (!!!!!) indicates that the image is downloading successfully. The router will reboot when the download is complete.



### Note

You may need to reset the router while in ROMMON mode by entering the **reset** command before entering the **tftpdnld** command. The router will prompt you to do this if needed. If prompted to reset the router, you must reset the router and then follow Step 2 through Step 6 to update the ROMMON image.

## Updating the ROMMON Image in IOS EXEC Mode

Complete these steps to upgrade the ROMMON image from IOS EXEC mode.

**Step 1** Download the ROMMON image C820\_RM\_ALT.srec.122-4r.XM2 from CCO and place it on your TFTP server.

**Step 2** In IOS EXEC mode, save the current configuration by entering the command **copy running-config startup-config**.

**Step 3** Enter **copy tftp: rommon:**, and answer the prompts as shown in the following example:

```
820-2#copy tftp: rommon:
Address or name of remote host []? 223.255.254.253
Source filename []? C820_RM_ALT.srec.122-4r.XM2
Destination filename [C820_RM_ALT.srec.122-4r.XM2]?
Loading C820_RM_ALT.srec.122-4r.XM2 from 223.255.254.253 (via Ethernet0): !
WARNING...
Do not attempt ROMMON upgrades unless you know what you are doing.
Writing to ROMMON must not be interrupted.
Do not reset the router during this operation.
Do what you can to ensure power to the router is not interrupted.
The router will reload after ROMMON upgrade is successfully completed.
Do you want to continue?[confirm]
```

Press **Enter** to continue. The router will begin downloading the ROMMON image. Successful download is indicated by a series of exclamation marks (!!!!!). The router will automatically reboot.

## Obtaining Documentation

These sections explain how to obtain documentation from Cisco Systems.

### World Wide Web

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com>

Translated documentation is available at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

### Ordering Documentation

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products Marketplace:  
[http://www.cisco.com/cgi-bin/order/order\\_root.pl](http://www.cisco.com/cgi-bin/order/order_root.pl)
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:  
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, U.S.A.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

### Documentation Feedback

You can submit comments electronically on Cisco.com. In the Cisco Documentation home page, click the **Fax** or **Email** option in the “Leave Feedback” section at the bottom of the page.

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit your comments by mail by using the response card behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Document Resource Connection  
170 West Tasman Drive  
San Jose, CA 95134-9883

## ■ Obtaining Technical Assistance

We appreciate your comments.

# Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

## Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you with these tasks:

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

If you want to obtain customized information and service, you can self-register on Cisco.com. To access Cisco.com, go to this URL:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco Technical Assistance Center (TAC) is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two levels of support are available: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Cisco TAC inquiries are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

The Cisco TAC resource that you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

## Cisco TAC Web Site

You can use the Cisco TAC Web Site to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

<http://www.cisco.com/register/>

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC Web Site, you can open a case online by using the TAC Case Open tool at this URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC Web Site.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

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■ Obtaining Technical Assistance